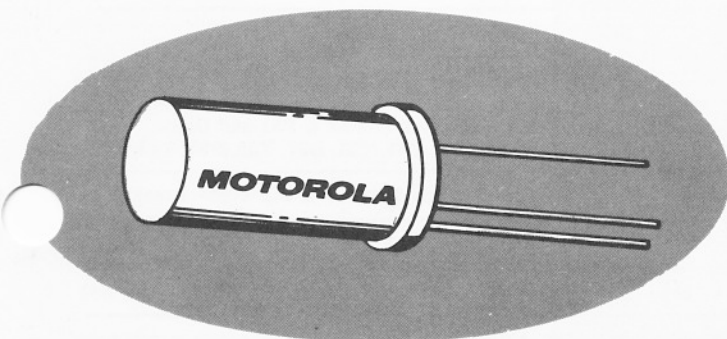
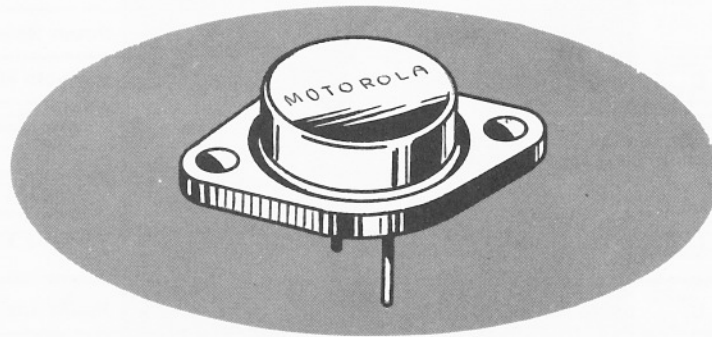
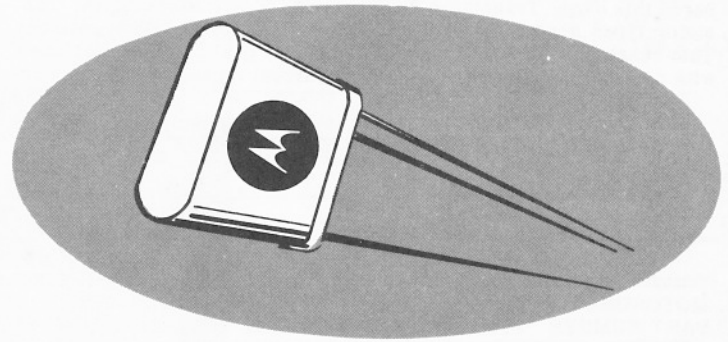
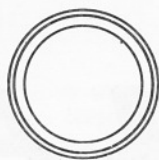




# **MOTOROLA**

## **TRANSISTOR REPLACEMENT GUIDE**



**A****B****C****D****E****F****G****H**

## USING THE REPLACEMENT GUIDE

During the growth of the transistor art from its infancy of just a few years back to its present state, some transistor types used originally in Motorola equipment have been superseded in the manufacturer's transistor line by improved, more reliable and redesignated types. These current transistors have electrical and mechanical characteristics compatible with the original transistor and can be used to replace the original type. For your convenience, Motorola has prepared this handy Transistor Replacement Guide listing original transistor types used in Motorola equipment and the current transistor. This chart will aid you to make efficient use of your transistor stock with correlation between original and current types.

Read across the Transistor Replacement Guide only. DO NOT attempt to interpret the guide in any other respect.

Here is an example: The current transistor superseding the 2NJ3A is a 2N291. The 2N291 is also the current transistor type for a 2NJ6. DO NOT interpret this to mean that a 2NJ6 can be used as a replacement for a 2NJ3A. Neither can a 2NJ3A or a 2NJ6 be used to replace an original 2N291. Notice that some transistor types are used in several different pieces of equipment. Be sure to check that the current transistor type can be used in the equipment being serviced.

Field Bulletins will be issued so that you can keep your guide up-to-date.

WHEN ORDERING TRANSISTORS, ORDER BY PART NUMBER OF THE CURRENT TRANSISTOR.

### TRANSISTOR REPLACEMENT GUIDE

ORIGINAL TRANSISTOR				CURRENT OR REPLACEMENT TRANSISTOR				EQUIPMENT
MOTOROLA PART NUMBER	EIA TYPE	MFG TYPE	OUTLINE DETAIL	MOTOROLA PART NUMBER	EIA TYPE	MFG TYPE	OUTLINE DETAIL	
48C 124201	----	2NJ1A	C	48K 125276	2N109M2	----	D	Power Line Carrier
48K 124203	----	2NJ3A	C	48K 125294	2N291	----	C	Portable Models H23, P33, H21, & P31
48C 124205	----	XN6B	C	48K 125276	2N109M2	----	D	Power Line Carrier
48K 124206	----	XN12	A	48K 125270	----	XN12A	A	Portable Models H23, P33, H21, & P31
				48K 125267	----	MN23	A	Power Voice Speaker & Big Voice Speaker
48K 124207	----	2NJ6	C	48K 125294	2N291	-----	C	Portable Models H23, P33, H21, & P31
48K 124212	----	2NJ2B	C	48K 125280	2N140M2	----	D	Power Line Carrier
48K 124213	----	----	C	48K 124299	----	R52	C	Microphone Models TU351, TU352, TU353 and TU354
48K 124215	----	2NJ2G	C	48K 125285	2N217 (wht. dot)	----	D	Portable Models H23, P33, H21, & P31
48K 124222	----	2NJ2C	C	48K 125280	2N140M2	----	D	Power Line Carrier
48K 124232	----	2NJ2D	C	48K 125276	2N109M2	----	D	Power Line Carrier
48K 124233	2N132	----	G	48K 125285	2N217 (wht. dot)	----	D	Portable Models H23, P33, H21, & P31
48K 124234	2N112	----	F	48K 125222	2N218	----	D	Portable Models H23, P33, H21, & P31
48K 124236	2N111	----	F	48K 125222	2N218	----	D	Portable Models H23, P33, H21, & P31
48K 124239	2N138	----	G	48K 125285	2N217 (wht. dot)	----	D	Portable Models H23, P33, H21, & P31
48K 124238	2N131	----	G	48K 125276	2N109M2	----	D	Power Line Carrier
48K 124242	----	2NJ2E	C	48K 125280	2N140M2	----	D	Power Line Carrier
48C 124246	2N176	----	A	48B 125298	----	MN46	A	Portable Models P33 & P31 and Disp. Mdl's. T31, D31, T21, D21, T33, D33, T23, D23
				48K 125267	----	MN23	A	Power Voice Speaker & Big Voice Speaker
				48C 124246	2N176	----	A	Use only a 2N176 in STAN-PAC Equipment
48K 124252	----	2NJ2F	C	48K 125222	2N218	----	D	Portable Models H23, P33, H21, & P31
48K 124277	2N111M1	----	F	48K 125280	2N140M2	----	D	Power Line Carrier
48K 124277	or 2N111A	----	F					
48K 124279	2N112M1	----	F	48K 125280	2N140M2	----	D	Power Line Carrier

48C 124297	----	R98	C	48K 124297	----	R98	C	Railroad Radio, Footboard Control Unit
48K 124299	----	R52	C	48K 124297	----	R98	C	Railroad Radio, Footboard Control Unit
				48K 124299	----	R52	C	Microphone Models TU351, TU351A, TU352, TU352A, TU352AN, TU353, TU354, TU381, TU381-C2, TU428, TU535, TU536, TU538, and 1V852400
48K 125207	----	XN12A	A	48K 125207	----	XN12A	A	Portable Models H23, P33, H21, & P31
48K 125208	----	XN12B	A	48K 125267	----	MN23	A	Power Voice Speaker
48K 125212	----	XN12C	A	48K 125218	----	XN12E	A	Portable Models H23, P33, H21, & P31
48K 125213	----	XN12D	A	48K 125218	----	XN12E	A	Portable Models H23, P33, H21, & P31
48K 125218	----	XN12E	A	48K 125218	----	XN12E	A	Portable Models H23, P33, H21, & P31
48K 125219	----	XN12F	A	48K 125218	----	XN12E	A	Portable Models H23, P33, H21, & P31
48K 125222	2N218	----	D	48K125222	2N218	----	D	Portable Models H23, P33, H21, & P31 & Disp. Mdls. T31, D31, D21, T21, T33 D33, T23, & D23
48K 125225	2N289*	XN13D	H	48K 125271	2N270	----	E	Portable Models H23, P33, H21, & P31
48C 125252	----	----	B	48C 125252	----	----	B	Disp. Mdl. T31, D31, T21, D21, T33, D33, T23, & D23
48K 125263	2N288*	MN13C	H	48K 125263	2N288*	MN13C	H	Power Voice Megaphone, Pre-Amp TU565
48K 125266	----	MN22	A	48K 125266	----	MN22	A	Use only an MN22 in Port. Mdls. H23, H31, & Disp. Mdls. T31, D31, T21, D21, T33, D33, T23, & D23
				48K 125267	----	MN23	A	Power Voice Megaphone
48K 125267	----	MN23	A	48K 125267	----	MN23	A	Port. Mdls. P33, P31, & Disp. Mdls. T31, D31, T21, D21, T33, D33, T23, D23, & TK648, TK649, TK650, TK655
48K 125270	2N217 (uncoded)	----	D	48K 125285	2N217 (wht. dot)	----	D	Port. Mdls. H23, P33, H21, P31, & Disp. Mdls. T31, D31, T21, D21, T33, D33, T23, D23
				48B 125270	2N217 (uncoded)	----	D	Port. Test Set TU546 & Remote Control Console Mdl. TA270
48K 125271	2N270	----	E	48K 125271	2N270	----	E	Port. Mdls. H23, P33, H21, P31, & Power Voice Megaphone
48K 125276	2N109M2	----	D	48K 125276	2N109M2	----	D	Power Line Carrier
48K 125280	2N140M2	----	D	48K 125280	2N140M2	----	D	Power Line Carrier
48C 125282	2N287*	MN13B XN13B	H	48C 125282	2N287*	MN13B	H	Disp. Mdls. T31, D31, T21, D21, T33, D33, T23, & D23
48K 125284	2N217 (red dot)	----	D	48K 125284	2N217 (red dot)	----	D	Port. Mdls. H23, P33, H21, P31 & Disp. Mdls. T31, D31, T21, D21, T33, D33, T23, D23
48K 125285	2N217 (wht. dot)	----	D	48K 125285	2N217 (wht. dot)	----	D	Port. Mdls. H23, P33, H21, P31, & Disp. Mdls. T31, D31, T21, D21, T33, D33, T23, D23
48K 125286	----	----	B	48K 125286	----	----	B	"T-Power" Power Supplies
				48A 125299				R43GGT STAN-PAC Railroad Radio
48K 125294	2N291	----	C	48K 125294	2N291	----	C	Portable Models H23, P33, H21, & P31
48B 125298	----	MN46	A	48B 125298	----	MN46	A	Port. Mdls. P33 & P31 & Disp. Mdls. T31, D31, T21, D21, T33, D33, T23, D23 and NK181, NK182, NK191 & NK192
48K 125299	----	----	B	48K 125299	----	----	B	Disp Mdls. T31, D31, D21, T33, D33, T23, & D23, R43GGT STAN-PAC R.R.
48A 128219	2N247	----	D	48A 128219	2N247	----	D	Port. Test Set Mdl. TU546, Peaking Generator TK589
54K 859801	----	----	B	See 48K 125286				

\* EIA numbers reserved but not registered.



## Typical **MOTOROLA** Products Benefiting From the Application of Transistors :

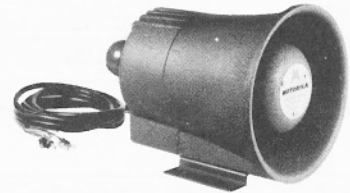
Development of the transistor opened completely new horizons in the electronic communications field. Motorola scientists and engineers were quick to realize the dynamic potential of the transistor for improved reliability, reduced size and lower power consumption. Motorola's background in transistor research, development, manufacture and application is your guarantee that the Motorola product using transistors is fully matured. . . . . test-proved for use in the most strenuous and exacting service.



"Handie-Talkie" Portable Radiophone



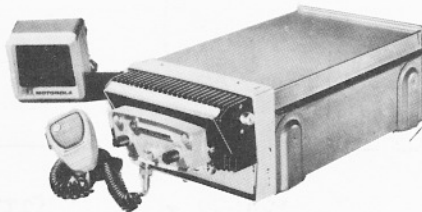
"Power Voice" Speaker



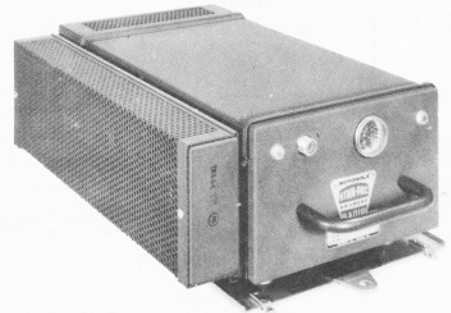
"Big Voice" Speaker



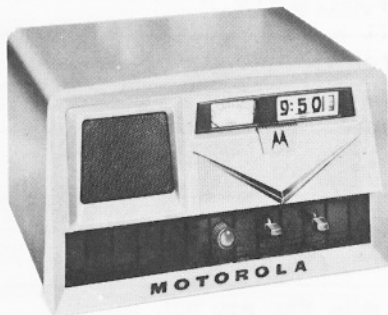
"Power Voice" Megaphone



"T-Power" Mobile Radiophone



"Stan-Pac" Railroad Radio



Remote Control Console



Industrial "Dispatcher" Radiophone



Radio Pager



**MOTOROLA** COMMUNICATIONS AND ELECTRONICS, INC.  
A SUBSIDIARY OF MOTOROLA, INC.

Parts Dept. 4910 W. Flournoy St., Chicago 44, Illinois

On the West Coast: 1616 Rollins Road  
Burlingame, Calif.

In the Southwest: 7138 Envoy Court  
Dallas 35, Texas



# transistors

**MOTOROLA**  
SERVICE STATION  
TRANSISTOR  
PRICE LIST  
(MAY 1, 1958)



MOTOROLA PART NO.	NET PRICE	MSS PRICE
48C 124246	\$ 2.73	\$ 2.46
48K 124297	\$ 2.85	\$ 2.57
48K 124299	\$ 1.68	\$ 1.51
48K 125207	\$ 3.89	\$ 3.50
48K 125218	\$ 3.89	\$ 3.50
48K 125222	\$ 1.93	\$ 1.74
48C 125252	\$ 6.00	\$ 5.40
48K 125263	\$ 3.10	\$ 2.79
48K 125266	\$ 3.58	\$ 3.22
48K 125267	\$ 3.89	\$ 3.50
48K 125270	\$ 1.70	\$ 1.53
48K 125271	\$ 1.89	\$ 1.70
48K 125276	\$ 1.70	\$ 1.53
48K 125280	\$ 2.06	\$ 1.85
48C 125282	\$ 3.45	\$ 3.11
48K 125284	\$ 1.70	\$ 1.53
48K 125285	\$ 1.70	\$ 1.53
48K 125286	\$ 11.00	\$ 11.00
48K 125294	\$ 1.81	\$ 1.63
48B 125298	\$ 3.42	\$ 3.08
48K 125299	\$ 11.00	\$ 11.00
48A 128219	\$ 3.22	\$ 2.90

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.



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